REMARKS

This is in response to the Final Office Action dated April 5, 2006. The claims in the case are claims 14-18 and 22-26. This response is being filed with a petition for a one-month extension of time and appropriate fee. Entry of the amendments presented herein is respectfully solicited as Applicants believe that the amendments bring the claims in condition for allowance, or at least reduce the issues in the case for purposes of Appeal.

Applicants have amended claim 14 to include the feature that component (a) is at least 15% by weight of leather fibers or a mixture of two or more organic fibrous materials wherein said organic fibrous materials consist of leather fibers, hair and silk. Support for this amendment is found generally throughout the specification, however, it s clear from the originally-filed claims that the organic fibers could be only leather fibers (see, for example, claim 22) or a mixture of two or more fibers (see, for example, claim 14). Claims 15, 22 and 23 have been amended to comport with the amended language of claim 14. No new matter is added.

Claims 14-18 and 22 have been rejected under 25 U.S.C. § 102(b) as allegedly anticipated by Datcoop. The Office Action remarks that Datcoop is replete with examples containing "only hide fibers and the ethylene-vinyl acetate copolymer/polyethylene blend in the absence of a tenside." However, it should be noted that Datcoop makes a clear distinction between "hide fibers" and "leather" (Compare Examples 1-4 and Examples 10-11). "Leather" is understood by one of skill in the art to mean a skin that has been treated (*i.e.*, "tanned") in a process in which the hair is removed.

> **"Leather"** tanned and dressed hide: the processed hide of animals with the fur or feathers removed. (Encarta® World English Dictionary [North American Edition] © & (P)2006 Microsoft Corporation).

A "hide" refers to the skin of an animal (although tanning terminology generally uses "hide" for mature, large animals (*e.g.*, horse hide, ox hide, cow hide, *etc.*) and "skin" is commonly used for small animals (*e.g.*, goat skin, deer skin, *etc.*). *See also* the definition of leather in the attached page of Hawley's Condensed Chemical Dictionary.

In Datcoop Examples 1-4, "hide" is clearly what is used, and these do not represent compositions containing "leather fibers or a mixture of two or more organic fibrous materials

wherein said organic fibrous materials consist of leather fibers, hair or silk." In other examples of Datcoop (*e.g.*, Examples 10 and 11), "leather" is clearly used, and, as a tanned product, the hair has been removed.

Examples 1-4, which use "hide" imply that the product is untanned material. Thus, leather fibers are not used (further evidence of this is that Examples 10 and 11 specifically recite "leather" rather than "hide"). Examples 1-4, therefore, also do not teach a mixture of *two or more* of leather fibers, hair and silk. Thus, with or without tenside, Examples 1-4 do not anticipate claims 14-18 and 22.

Examples 10 and 11 are the only relevant examples for teaching compositions containing leather fibers alone. However, Examples 10 and 11 are beyond the scope of the claims for anticipation purposes due to the nature of the components. That is, Examples 10 and 11 contain scrap leather and ground rubber; Example 14 contains zinc stearate). The statement that certain Figures show comparative data "without tenside" are not sufficiently defined to know whether the suggested composition falls within the scope of the claims. It is apparent that this statement refers specifically to Examples 1-4, which, as noted above, would not anticipate claims 14-18 and 22 in any event. The further statement on page 12, lines 32-34: "Electron microscope tests were carried out to compare the structure of the products of the invention and of *known products*" suggests that there is no anticipation. The Examiner has failed to cite a "known product" that falls within the scope of the pending claims. Thus, claims 14-18 and 22 are not anticipated by Datcoop.

Claims 14-18, 22, and 23 have been rejected under 35 U.S.C. §102(b) as allegedly anticipated by Czerwinski as leather fibers, binders, and fiber lengths. However, it must be noted that Czerwinski discloses compositions *comprising* liquid material and leather fibers (see col. 2, lines 20-22, as cited in the Office Action). However, a composition that is merely descried to comprise these two substances (but is in no way limited to this composition is not sufficiently defined in its physical properties.

Second, the compounds as defined by Czerwinski to be essential (*i.e.*, the "liquid") is not a discrete chemical compound, but comprises a class of compounds. Moreover, the class is only defined by its physical property of liquidity, but not by its *chemical* properties. The disclosure at col. 5, lines 21-35 is understood in a similar manner, For example, the term

"polyvinyl acetate" is not a discrete chemical compound but refers to a polymer class (*i.e.*, those polymers formed from the vinylacetate monomer). However, it is in the skilled artisan's common technical knowledge that the polymers of this class can vary (*e.g.*, in their molecular weight, in the direction of the monomer linkage (head to tail; head to head), in the degree of side products obtained during the polymerization reaction, *etc.*). All of these parameters can directly influence the physical properties of the polymer. Thus, the polyvinyl acetate with a low molecular weight can be present in the form of a liquid at ambient conditions, while a polyvinyl acetate with a high molecular weight would be a solid under the same conditions. Both compounds would nevertheless fall under the scope of the term "polyvinyl acetate."

Furthermore, the disclosure in Col. 5 also contains another relevant feature that distinguishes it from the present invention. The Czerwinski compositions require the presence of the polymers in the form of *solutions or suspensions* (see col. 5, line 24). In other words, the presence of another compound is *essentially required* by Czerwinski: this additional compound functions as a *solvent* or a *dispersion medium* for the polymeric compound. However, such a compound is *not present* in the compositions of the present claims.

Applicants invite the Examiner's attention to the process of preparing the compounds of the present invention (as disclosed, for example on page 14, lines 28-35 through page 15, lines 1-5 (of the translated document)). As can be seen from the process of preparing the compositions of the invention, the polymeric compounds are initially present in the form of dispersions, however, the dispersions are *coagulated* during the process and the resulting product is dewatered. Thus, it is readily apparent that the polymers of the compositions are not present in the form of solutions or dispersions, as in the compositions of Czerwinski.

Finally, it should be noted that the Czerwinski disclosure relating to the amounts of binder (cited in the Office Action at Col. 5, lines 35-50) in the Applicant's view does not refer to the content of the polymeric compound in the final composition, but refers instead to the content of the solution or suspension of the polymeric compound. Thus, it cannot be derived clearly and unambiguously from Czerwinski whether the polymeric compound of the

Czerwinski composition is present in the same amount as in the composition of the present invention.

Claims 14-17, 19 and 23 have also been rejected under 35 U.S.C. §102(b) as allegedly anticipated by Bergman, as it teaches wool fibers mixed with thermoplastic material. However, it appears that the selection of the fibers is critical due to the mechanical properties needed in the finished product. Nowhere does the reference teach leather fibers, and it is taught at Col. 5, lines 61-67 that the fibers are selected from cotton, jute, flax, wool or spinnable cellulosic fiber. Silk is not mentioned and neither is leather. On the contrary, the applicants' claim 14 refers to leather fibers or a mixture of ***two or more*** organic fibrous materials of leather, silk, or hair. Since Bergman does not teach leather fibers, or a combination of two or more of leather, hair or silk, Bergman does not anticipate claims 14-17, 19 and 23.

Applicants respectfully request withdrawal of the rejections of the claims under 35 U.S.C. § 102(b).

The Office Action has rejected claim 19 under 35 U.S.C. § 103(a) as allegedly obvious over the hypothetical combination of Czerwinski in view of Bergman. The Office Action asserts that it would be obvious to use the thermoplastic styrene-butadiene materials of Bergman in the compositions of Czerwinski. Applicants respectfully disagree.

As discussed above and in previous responses for Czerwinski, the compositions of the invention are fundamentally different with regard to physical properties (thixotropy vs. thermoplastic behavior and presence of the additional solvent/dispersion medium in the Czerwinski compositions). It should be noted that Czerwinski does not disclose anything regarding removal of the additional liquid from the compositions or whether this would be a suitable method to obtain a thermoplastic composite material. In contrast, one of skill in the art would understand that the presence of the liquid phase is essential for the thixotrophic behavior of the compositions, and thus, the whole content of the Czerwinski reference would lead one of skill in the art away from the combination of Czerwinski and Bergman. Further as Bergman teaches the use of cotton, jute, flax, wool or spinnable cellulosic fibers as an important part of the invention (see, for example, Bergman at col. 2, l11-30 and Col. 5, lines 60-67), and does not teach leather fibers or a combination of two or more fibers of leather,

hair or silk, the hypothetical combination proposed by the Examiner would change a fundamental property of the composition of Bergman. Czerwinski also teaches at col. 2, lines 56-61 that it is an object of his invention that the compositions provide a more flexible final product that "similar thixotropic products comprising asbestos or cellulosic materials as the thixotropic agent." Since Bergman specifically teaches the benefits of cellulosic fibers, it would be contrary to the teachings of Czerwinski to combine the teachings of Bergman. Thus, there is no motivation to combine the references, much less a reasonable expectation of success in doing so.

The Office Action has rejected claim 24 under 35 U.S.C. § 103(a) as allegedly obvious over the hypothetical combination of Czerwinski in view of Küchler. The Office Action alleges that it would be obvious to combine the teachings of Czerwinski which teaches thermoplastic compositions, but fails to teach dewatering and drying, with the process of Küchler. However, the *purpose* of Czerwinski is to produce liquid compositions, not solid, dried compositions. Thus, combining the compositions with the teachings of the process of Küchler would vitiate the purpose of Czerwinski's invention. The two references teach fundamentally different types of compositions; combining the two teachings would not be obvious as the purpose of these inventions would be contravened.

The Office Action has rejected claim 24 under 35 U.S.C. § 103(a) as allegedly obvious over the hypothetical combination of Czerwinski in view of Toyota. The Office Action asserts that it would be obvious to combine Toyota's article forming method with the teachings of Czerwinski. To reiterate, it is an important feature that the compositions of Czerwinski be *liquid* compositions. It is unclear how the method of Toyota to bond a composition to a backing material via a hotmelt adhesive is even applicable to the liquid compositions of Czerwinski. The Office Action frankly admits that Czerwinski fails to teach the dewatering and drying of the compositions (therefore, apparently recognizing that the Czerwinski compositions are liquid) and yet suggests that the article forming steps of Toyota could be applied to such compositions. Applicants respectfully submit that there would be no reasonable expectation of success in such a combination and certainly no motivation for anyone of skill in the art to make such a hypothetical combination.

Applicants respectfully request withdrawal of the rejections of the claims under 35 U.S.C. § 103(a).

Applicants earnestly submit that the claims are in condition for allowance, which action is respectfully requested.

Respectfully submitted,

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Alfred W. Zaher
Registration No. 42,248

Blank Rome LLP
One Logan Square
Philadelphia PA 19103
Telephone: (215) 569-5364
Facsimile: (215) 832-5364
Email: zaher@blankrome.com

contain as few as six or as many as 50 leaves of varying dimensions; the entire assembly can be pulled out of the shell for cake removal. In some models the leaves rotate.

"Leafseal" *[Humphrey].* TM for a formulation of decenylsuccinic acid and its esters.
Use: Direct application to plants to enable them to resist frost and drought.

leather. An animal skin or hide that has been permanently combined with a tanning agent that causes a physicochemical change in the protein components of the skin. This change renders it resistant to putrefactive bacteria, enzymes, and hot water, increases its strength and abrasion resistance, and makes it serviceable for long periods of time. Tanning agents are either vegetable, mineral, or synthetic. Hides from cows or steers are chiefly used for men's shoes, transmission belting, and other heavy-duty service. These are usually vegetable-tanned. Lighter grades made from the skins of sheep, calves, or reptiles are used for shoe uppers, luggage, gloves, and similar end products (chrome-tanned). Leather is a naturally poromeric material that retains the microporosity of the original skin; this property makes it uniquely applicable to footwear; to a limited extent it is able to conform to the contour of the individual foot. Leather is made in many colors, weights, and finishes. However, it has been replaced to an increasing extent by plastics for many minor uses, and by synthetics for shoe uppers and soling.
See poromeric; tanning.

leavening agent. See yeast; baking powder.

Lebedev process. Formation of butadiene from ethanol by catalytic pyrolysis. The catalysts used are mixtures of silicates and aluminum and zinc oxides.

Le Blanc. (1742–1806). A French inventor of the first successful process for making soda ash. His patent was confiscated by the Revolutionist government, and the process was used widely for years without either acknowledgment or remuneration. His original formula was 100 parts salt cake, 100 parts limestone, and 50 parts coal.

Lechanche cell. See dry cell.

Le Chatelier. (1850–1936). A French physical chemist, famous chiefly for his statement of the equilibrium principle (often known as Le Chatelier's law). His work included investigations of cements, alloys, and gaseous combustion. The principle may be stated: every system in equilibrium is conservative and tends to resist changes upon it by reacting in such a way as to help nullify the imposed change.

lecithin. $C_1H_{\eta}O_2NRR'$, R and R' being fatty acid groups. Pure lecithin is a phosphatidyl choline. The lecithins are mixtures of diglycerides of fatty acids linked to the choline ester of phosphoric acid. The lecithins are classed as phosphoglycerides or phosphatides (phospholipids). Commercial lecithin is a mixture of acetone-insoluble phosphatides. FCC specifies not less than 50% acetone-insoluble matter (phosphatides).
Properties: Light brown to brown, viscous semiliquid with a characteristic odor. Partly soluble in water and acetone; soluble in chloroform and benzene.
Derivation: Usually from soybean oil, also from corn, other vegetable seeds, egg yolk, and other animal sources.
Grade: Technical, unbleached, bleached; fluid, plastic, edible, FCC, 96+% for biochemical or chromatographic standards.
Use: Emulsifying, dispersing, wetting, penetrating agent, and antioxidant; in margarine, mayonnaise, chocolate and candies, baked goods, animal feeds, paints, petroleum industry (drilling, leaded gasoline), printing inks, soaps and cosmetics, mold release for plastics, blending agent in oils and resins, rubber processing, lubricant for textile fibers.

lectin. A type of protein occurring in the seeds certain plants, especially legumes, characterized b unusual binding specificity; their precise function the plant is being researched. Studies have bee made on the molecular structure and carbohydra content of the lectin found in the European hea sainfoin.

Leduc's rule. States that the volume occupie by a gas mixture is equal to the sum of the volume occupied separately by each constituent at the sam temperature and pressure as the mixture.

LEED. Low-energy electron diffraction.

lees. The sediment at bottom of wine storage tank.

Leeuwenhoek, van. See van Leeuwenhoek, Anton.

Lee, Yuan T. (1936–). Awarded Nobel prize in chemistry in 1986 jointly with Polanyi and Herschbach. A former student of Herschbach, Lee refined molecular-beam and laser techniques, combining them with theory to perform definitive studies of reactions of individual complex molecules. Doctorate from University of California in 1965.

legal chemistry. (forensic chemistry). The application of chemical knowledge and procedures to matters involving civil or criminal law and to all questions where control of chemical compounds, products, or processes is vested in agencies of Federal or state governments. Legal chemistry applies to the following areas: (1) Crime detection: primarily identification of poisons, of bloodstains, writing and typewriter inks, and a host of miscible materials